Executive Engineer,
Yelahanka Division,
Bruhat Bengaluru Mahanagara Palike

e – MEASUREMENT BOOK

(FIFTH AND PART)

Name of the Package:

Restoration and Improvements of Roads from Doddaballapura Main Road to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO -12)

AGENCY: Sri. H Srinivas Reddy

Estimate Cost: 1000.00 Lakhs

Project Management Consultants:
SAPIENCE CONSULTANTS AND ENGINEERS, BANGALORE.
#B9-003, GANGA, Jnanabharathi Enclave, Valagerahalli, Mysore Road Bangalore 560056
Ph: 080-29523634; E-Mail: SAPIENCEBANGALORE@GMAIL.COM

BRUHAT BENGALURU MAHANAGARA PALIKE

Yelahanka Division

DETAILED MEASUREMENTS

EMB

Name of the Package:

Restoration and Improvements of Roads from Doddaballapura Main Road to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO-12)

Agency: Sri. Srinivasa Reddy H

PMC: Sapience Consultants and Engineers

A.E: Sri. Ramakrishnaiah

A.E.E.: Sri. Sachin

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Restoration and Improvements of Roads from Doddaballapura Main Road to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO -12)

Measurement Sheet

FIFTH and PART

Item No:	1
Item Name:	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embarnkemnt location to a lead of 1.00 km and complete as per specifications MORTH Specification No.301 (I No-19.14,P No-143)

Final Measurement Date(s) : 14/07/2022

Chainage / Land Mark		Nos	L (m)	B (m)	B1 (m)	Avg B (m)	D (m)	Qty	REMARKS
Earth work for road									
Self Financed Society 407 Colony, Road from Yelahanka (Major Unni Krishan) Road to 6th Main									
0.00	7.00								Approach
7.00	30.00	1	23.00	0.90		0.90	0.20	4.14	
30.00	60.00	1	30.00	0.90		0.90	0.20	5.40	
60.00	90.00	1	30.00	0.90		0.90	0.20	5.40	
90.00	120.00	1	30.00	0.90		0.90	0.20	5.40	
120.00	150.00	1	30.00	0.90		0.90	0.20	5.40	
150.00	180.00	1	30.00	0.90		0.90	0.20	5.40	
180.00	210.00	1	30.00	0.90		0.90	0.20	5.40	
210.00	240.00	1	30.00	0.90		0.90	0.20	5.40	
240.00	270.00	1	30.00	0.90		0.90	0.20	5.40	
270.00	300.00	1	30.00	0.90		0.90	0.20	5.40	
300.00	330.00	1	30.00	0.90		0.90	0.20	5.40	
330.00	360.00	1	30.00	0.90		0.90	0.20	5.40	
360.00	390.00	1	30.00	0.90		0.90	0.20	5.40	
390.00	420.00	1	30.00	0.90		0.90	0.20	5.40	
420.00	450.00	1	30.00	0.90		0.90	0.20	5.40	
450.00	480.00	1	30.00	0.90		0.90	0.20	5.40	
480.00	510.00	1	30.00	0.90		0.90	0.20	5.40	
510.00	540.00	1	30.00	0.90		0.90	0.20	5.40	
540.00	570.00	1	30.00	0.90		0.90	0.20	5.40	
570.00	600.00	1	30.00	0.90		0.90	0.20	5.40	
600.00	630.00	1	30.00	0.90		0.90	0.20	5.40	
630.00	660.00	1	30.00	0.90		0.90	0.20	5.40	

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SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

Chainage		Nos	L	B	B1	Avg B	D	Qty	REM
Land Mark			(m)	(m)	(m)	(m)	(m)		
660.00	690.00	1	30.00	0.90		0.90	0.20	5.40	
690.00	720.00	1	30.00	0.90		0.90	0.20	5.40	
720.00	750.00	1	30.00	0.90		0.90	0.20	5.40	
750.00	780.00	1	30.00	0.90		0.90	0.20	5.40	
780.00	810.00	1	30.00	0.90		0.90	0.20	5.40	
810.00	840.00	1	30.00	0.90		0.90	0.20	5.40	
840.00	870.00	1	30.00	0.90		0.90	0.20	5.40	
870.00	900.00	1	30.00	0.90		0.90	0.20	5.40	
900.00	930.00	1	30.00	0.90		0.90	0.20	5.40	
930.00	960.00	1	30.00	0.90		0.90	0.20	5.40	
960.00	990.00	1	30.00	0.90		0.90	0.20	5.40	
990.00	1020.00	1	30.00	0.90		0.90	0.20	5.40	
1020.00	1050.00	1	30.00	0.90		0.90	0.20	5.40	
1050.00	1080.00	1	30.00	0.90		0.90	0.20	5.40	
1080.00	1110.00	1	30.00	0.90		0.90	0.20	5.40	
							Total Qty	198.54	
							Total BOQ Quantity	5008.80	
							Quantity Paid up to FOURTH Part Bill	5008.80	
							Quantity Reserved for Approval of Workslip and EIRL	198.54	
							Qty Payable in this Bill	0.00	CUM

Contractor Representative

SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

Consultant Representative

Asst Engineer
Yelahanka New Town Sub Division
BBMP

Asst.Executive Engineer
Yelahanka New Town Sub Division
BBMP

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Restoration and Improvements of Roads from Doddaballapura Main Road to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO -12)

Measurement Sheet

FIFTH and PART

Item No:	15
Item Name:	KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications (P.No.-155,I.No.-20.18)

Final Measurement Date(s) : 18/07/2022

Chainage Land Mark		Nos	L (m)	B (m)	B1 (m)	Avg B (m)	D (m)	Qty	REMARKS
wet mix macadam									
Self Financed Society 407 Colony, Road from Yelahanka (Major Unni Krishan) Road to 6th Main									
0.00	7.00								Approach
7.00	30.00	1	23.00	0.90		0.90	0.20	4.14	
30.00	60.00	1	30.00	0.90		0.90	0.20	5.40	
60.00	90.00	1	30.00	0.90		0.90	0.20	5.40	
90.00	120.00	1	30.00	0.90		0.90	0.20	5.40	
120.00	150.00	1	30.00	0.90		0.90	0.20	5.40	
150.00	180.00	1	30.00	0.90		0.90	0.20	5.40	
180.00	210.00	1	30.00	0.90		0.90	0.20	5.40	
210.00	240.00	1	30.00	0.90		0.90	0.20	5.40	
240.00	270.00	1	30.00	0.90		0.90	0.20	5.40	
270.00	300.00	1	30.00	0.90		0.90	0.20	5.40	
300.00	330.00	1	30.00	0.90		0.90	0.20	5.40	
330.00	360.00	1	30.00	0.90		0.90	0.20	5.40	
360.00	390.00	1	30.00	0.90		0.90	0.20	5.40	
390.00	420.00	1	30.00	0.90		0.90	0.20	5.40	
420.00	450.00	1	30.00	0.90		0.90	0.20	5.40	
450.00	480.00	1	30.00	0.90		0.90	0.20	5.40	
480.00	510.00	1	30.00	0.90		0.90	0.20	5.40	
510.00	540.00	1	30.00	0.90		0.90	0.20	5.40	
540.00	570.00	1	30.00	0.90		0.90	0.20	5.40	
570.00	600.00	1	30.00	0.90		0.90	0.20	5.40	
600.00	630.00	1	30.00	0.90		0.90	0.20	5.40	

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SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

Chainage		Nos	L	B	B1	Avg B	D	Qty	REM
Land Mark			(m)	(m)	(m)	(m)	(m)		
630.00	660.00	1	30.00	0.90		0.90	0.20	5.40	
660.00	690.00	1	30.00	0.90		0.90	0.20	5.40	
690.00	720.00	1	30.00	0.90		0.90	0.20	5.40	
720.00	750.00	1	30.00	0.90		0.90	0.20	5.40	
750.00	780.00	1	30.00	0.90		0.90	0.20	5.40	
780.00	810.00	1	30.00	0.90		0.90	0.20	5.40	
810.00	840.00	1	30.00	0.90		0.90	0.20	5.40	
840.00	870.00	1	30.00	0.90		0.90	0.20	5.40	
870.00	900.00	1	30.00	0.90		0.90	0.20	5.40	
900.00	930.00	1	30.00	0.90		0.90	0.20	5.40	
930.00	960.00	1	30.00	0.90		0.90	0.20	5.40	
960.00	990.00	1	30.00	0.90		0.90	0.20	5.40	
990.00	1020.00	1	30.00	0.90		0.90	0.20	5.40	
1020.00	1050.00	1	30.00	0.90		0.90	0.20	5.40	
1050.00	1080.00	1	30.00	0.90		0.90	0.20	5.40	
1080.00	1110.00	1	30.00	0.90		0.90	0.20	5.40	
							Total Qty	198.54	
							Qty Payable in this Bill	198.54	CUM

Contractor Representative

SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

Consultant Representative

Asst Engineer
Yelahanka New Town Sub Division
BBMP

Asst.Executive Engineer
Yelahanka New Town Sub Division
BBMP

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Restoration and Improvements of Roads from Doddaballapura Main Road to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO -12)

Measurement Sheet

FIFTH and PART

Item No:	16
Item Name:	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and sparying primer at the rte of 0.60 kg /sqm using mechanical means complete as per specifications .Clause 502 of MoRTH V th Revision (pg No.158 I.No-21.6), Issue Rate

Final Measurement Date(s) : 20/07/2021;

Chainage Land Mark		Nos	L (m)	B (m)	B1 (m)	Avg B (m)	D (m)	Qty	REMARKS
Prime coat									
Self Financed Society 407 Colony, Road from Yelahanka (Major Unni Krishan) Road to 6th Main									
0.00	7.00								Approach
7.00	30.00	1	23.00	0.90		0.90		20.70	
30.00	60.00	1	30.00	0.90		0.90		27.00	
60.00	90.00	1	30.00	0.90		0.90		27.00	
90.00	120.00	1	30.00	0.90		0.90		27.00	
120.00	150.00	1	30.00	0.90		0.90		27.00	
150.00	180.00	1	30.00	0.90		0.90		27.00	
180.00	210.00	1	30.00	0.90		0.90		27.00	
210.00	240.00	1	30.00	0.90		0.90		27.00	
240.00	270.00	1	30.00	0.90		0.90		27.00	
270.00	300.00	1	30.00	0.90		0.90		27.00	
300.00	330.00	1	30.00	0.90		0.90		27.00	
330.00	360.00	1	30.00	0.90		0.90		27.00	
360.00	390.00	1	30.00	0.90		0.90		27.00	
390.00	420.00	1	30.00	0.90		0.90		27.00	
420.00	450.00	1	30.00	0.90		0.90		27.00	
450.00	480.00	1	30.00	0.90		0.90		27.00	
480.00	510.00	1	30.00	0.90		0.90		27.00	
510.00	540.00	1	30.00	0.90		0.90		27.00	
540.00	570.00	1	30.00	0.90		0.90		27.00	
570.00	600.00	1	30.00	0.90		0.90		27.00	
600.00	630.00	1	30.00	0.90		0.90		27.00	
630.00	660.00	1	30.00	0.90		0.90		27.00	
660.00	690.00	1	30.00	0.90		0.90		27.00	

SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

Chainage		Nos	L	B	B1	Avg B	D	Qty	REM
Land Mark			(m)	(m)	(m)	(m)	(m)		
690.00	720.00	1	30.00	0.90		0.90		27.00	
720.00	750.00	1	30.00	0.90		0.90		27.00	
750.00	780.00	1	30.00	0.90		0.90		27.00	
780.00	810.00	1	30.00	0.90		0.90		27.00	
810.00	840.00	1	30.00	0.90		0.90		27.00	
840.00	870.00	1	30.00	0.90		0.90		27.00	
870.00	900.00	1	30.00	0.90		0.90		27.00	
900.00	930.00	1	30.00	0.90		0.90		27.00	
930.00	960.00	1	30.00	0.90		0.90		27.00	
960.00	990.00	1	30.00	0.90		0.90		27.00	
990.00	1020.00	1	30.00	0.90		0.90		27.00	
1020.00	1050.00	1	30.00	0.90		0.90		27.00	
1050.00	1080.00	1	30.00	0.90		0.90		27.00	
1080.00	1110.00	1	30.00	0.90		0.90		27.00	
							Total Qty	992.70	
							Qty Payable in this Bill	992.70	SQM

Contractor Representative

Consultant Representative

Asst Engineer
Yelahanka New Town Sub Division
BBMP

Asst.Executive Engineer
Yelahanka New Town Sub Division
BBMP

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Restoration and Improvements of Roads from Doddaballapura Main Road to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO -12)

Measurement Sheet

FIFTH and PART

Item No:	EIRL
Item Name:	Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and/ or compressed air to receive the bitumenous treatment including cost of all materials,labour, HOM of machinaries complete as per specifications. MORTH specification Clause 501

Final Measurement Date(s) : 22/07/2022;

Chainage Land Mark		Nos	L (m)	B (m)	B1 (m)	Avg B (m)	D (m)	Qty	REMARKS
Cleaning									
Self Financed Society 407 Colony, Road from Yelahanka (Major Unni Krishan) Road to 6th Main									
0.00	7.00	1	7.00	17.30	10.70	14.00		98.00	
7.00	30.00	1	23.00	10.70	10.50	10.60		243.80	
30.00	60.00	1	30.00	10.50	10.50	10.50		315.00	
60.00	90.00	1	30.00	10.50	10.40	10.45		313.50	
90.00	120.00	1	30.00	10.40	10.40	10.40		312.00	
120.00	150.00	1	30.00	10.40	11.10	10.75		322.50	
150.00	180.00	1	30.00	11.10	11.10	11.10		333.00	
180.00	210.00	1	30.00	11.10	11.30	11.20		336.00	
210.00	240.00	1	30.00	11.30	11.00	11.15		334.50	
240.00	270.00	1	30.00	11.00	13.00	12.00		360.00	
270.00	300.00	1	30.00	13.00	10.70	11.85		355.50	
300.00	330.00	1	30.00	10.70	10.80	10.75		322.50	
330.00	360.00	1	30.00	10.80	10.30	10.55		316.50	
360.00	390.00	1	30.00	10.30	10.80	10.55		316.50	
390.00	420.00	1	30.00	10.80	10.80	10.80		324.00	
420.00	450.00	1	30.00	10.80	10.90	10.85		325.50	
450.00	480.00	1	30.00	10.90	10.60	10.75		322.50	
480.00	510.00	1	30.00	10.60	10.80	10.70		321.00	
510.00	540.00	1	30.00	10.80	9.70	10.25		307.50	
540.00	570.00	1	30.00	10.60	11.60	11.10		333.00	
570.00	600.00	1	30.00	11.60	11.00	11.30		339.00	
600.00	630.00	1	30.00	11.00	10.80	10.90		327.00	
630.00	660.00	1	30.00	10.80	10.70	10.75		322.50	
660.00	690.00	1	30.00	10.70	11.00	10.85		325.50	
690.00	720.00	1	30.00	11.00	10.70	10.85		325.50	
720.00	750.00	1	30.00	10.70	10.80	10.75		322.50	
750.00	780.00	1	30.00	10.80	9.00	9.90		297.00	

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SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

Chainage		Nos	L	B	B1	Avg B	D	Qty	REM
Land Mark			(m)	(m)	(m)	(m)	(m)		
780.00	810.00	1	30.00	10.20	9.80	10.00		300.00	
810.00	840.00	1	30.00	9.80	9.80	9.80		294.00	
840.00	870.00	1	30.00	9.80	9.80	9.80		294.00	
870.00	900.00	1	30.00	9.80	9.60	9.70		291.00	
900.00	930.00	1	30.00	9.60	9.80	9.70		291.00	
930.00	960.00	1	30.00	9.80	11.20	10.50		315.00	
960.00	990.00	1	30.00	11.20	11.20	11.20		336.00	
990.00	1020.00	1	30.00	11.20	13.20	12.20		366.00	
1020.00	1050.00	1	30.00	13.20	13.50	13.35		400.50	
1050.00	1080.00	1	30.00	13.50	13.30	13.40		402.00	
1080.00	1110.00	1	30.00	13.30	14.00	13.65		409.50	
CONTINUITY ROAD									
1110.00	1139.00	1	29.00	10.80	9.80	10.30		298.70	
DEDUCTION									
E POLE		-6	0.30	0.30		0.30		-0.54	
RAMP		-1	4.20	0.30		0.30		-1.26	
FOOTPATH		-1	8.00	1.80		1.80		-14.40	
MANHOLE		-19	0.64					-12.08	
RAMP		-1	7.00	0.45		0.45		-3.15	
RAMP		-1	5.20	0.60		0.60		-3.12	
FOOTPATH		-1	14.00	2.00		2.00		-28.00	
TREE		-1	2.00	2.00		2.00		-4.00	
RAMP		-1	4.10	0.80		0.80		-3.28	
LAMP POST		-1	0.60	0.60		0.60		-0.36	
RAMP		-1	7.40	0.60		0.60		-4.44	
RAMP		-1	8.60	2.60		2.30		-19.78	
Prime Coat Area		-1		992.70				-992.70	
							Total Qty	11382.39	
							Total BOQ Quantity	0.00	
							Quantity Reserved for Approval of Workslip and EIRL	11382.39	
							Qty Payable in this Bill	0.00	SQM

Contractor Representative

Consultant Representative

Asst Engineer
Yelahanka New Town Sub Division
BBMP

Asst Executive Engineer
Yelahanka New Town Sub Division
BBMP

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Restoration and Improvements of Roads from Doddaballapura Main Road to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO -12)

Measurement Sheet

FIFTH and PART

Item No:	17
Item Name:	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen (VG10) on the prepared black topped surfaces at 2.5 kg per 10sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of materials , labour, HOM complete as per specification P.No.-158,I.No-21.7,Issue Rate

Final Measurement Date(s) : 22/07/2022;

Chainage		Nos	L	B	B1	Avg B	D	Qty	REMARKS
Land Mark			(m)	(m)	(m)	(m)	(m)		
Tack coat									
Self Financed Society 407 Colony, Road from Yelahanka (Major Unni Krishan) Road to 6th Main									
0.00	7.00	1	7.00	17.30	10.70	14.00		98.00	
7.00	30.00	1	23.00	10.70	10.50	10.60		243.80	
30.00	60.00	1	30.00	10.50	10.50	10.50		315.00	
60.00	90.00	1	30.00	10.50	10.40	10.45		313.50	
90.00	120.00	1	30.00	10.40	10.40	10.40		312.00	
120.00	150.00	1	30.00	10.40	11.10	10.75		322.50	
150.00	180.00	1	30.00	11.10	11.10	11.10		333.00	
180.00	210.00	1	30.00	11.10	11.30	11.20		336.00	
210.00	240.00	1	30.00	11.30	11.00	11.15		334.50	
240.00	270.00	1	30.00	11.00	13.00	12.00		360.00	
270.00	300.00	1	30.00	13.00	10.70	11.85		355.50	
300.00	330.00	1	30.00	10.70	10.80	10.75		322.50	
330.00	360.00	1	30.00	10.80	10.30	10.55		316.50	
360.00	390.00	1	30.00	10.30	10.80	10.55		316.50	
390.00	420.00	1	30.00	10.80	10.80	10.80		324.00	
420.00	450.00	1	30.00	10.80	10.90	10.85		325.50	
450.00	480.00	1	30.00	10.90	10.60	10.75		322.50	
480.00	510.00	1	30.00	10.60	10.80	10.70		321.00	
510.00	540.00	1	30.00	10.80	9.70	10.25		307.50	
540.00	570.00	1	30.00	10.60	11.60	11.10		333.00	
570.00	600.00	1	30.00	11.60	11.00	11.30		339.00	
600.00	630.00	1	30.00	11.00	10.80	10.90		327.00	
630.00	660.00	1	30.00	10.80	10.70	10.75		322.50	
660.00	690.00	1	30.00	10.70	11.00	10.85		325.50	
690.00	720.00	1	30.00	11.00	10.70	10.85		325.50	
720.00	750.00	1	30.00	10.70	10.80	10.75		322.50	

AE

SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

Chainage		Nos	L	B	B1	Avg B	D	Qty
Land Mark			(m)	(m)	(m)	(m)	(m)	
750.00	780.00	1	30.00	10.80	9.00	9.90		297.00
780.00	810.00	1	30.00	10.20	9.80	10.00		300.00
810.00	840.00	1	30.00	9.80	9.80	9.80		294.00
840.00	870.00	1	30.00	9.80	9.80	9.80		294.00
870.00	900.00	1	30.00	9.80	9.60	9.70		291.00
900.00	930.00	1	30.00	9.60	9.80	9.70		291.00
930.00	960.00	1	30.00	9.80	11.20	10.50		315.00
960.00	990.00	1	30.00	11.20	11.20	11.20		336.00
990.00	1020.00	1	30.00	11.20	13.20	12.20		366.00
1020.00	1050.00	1	30.00	13.20	13.50	13.35		400.50
1050.00	1080.00	1	30.00	13.50	13.30	13.40		402.00
1080.00	1110.00	1	30.00	13.30	14.00	13.65		409.50
CONTINUITY ROAD								
1110.00	1139.00	1	29.00	10.80	9.80	10.30		298.70
DEDUCTION								
E POLE		-6	0.30	0.30		0.30		-0.54
RAMP		-1	4.20	0.30		0.30		-1.26
FOOTPATH		-1	8.00	1.80		1.80		-14.40
MANHOLE		-19	0.64					-12.08
RAMP		-1	7.00	0.45		0.45		-3.15
RAMP		-1	5.20	0.60		0.60		-3.12
FOOTPATH		-1	14.00	2.00		2.00		-28.00
TREE		-1	2.00	2.00		2.00		-4.00
RAMP		-1	4.10	0.80		0.80		-3.28
LAMP POST		-1	0.60	0.60		0.60		-0.36
RAMP		-1	7.40	0.60		0.60		-4.44
RAMP		-1	8.60	2.60		2.30		-19.78

Total Qty	**12375.09**
Total BOQ Quantity	**27929.50**
Quantity Paid up to Fourth Part Bill	**16043.50**
Quantity Reserved for Approval of Workslip and EIRL	**489.09**
Qty Payable in this Bill	**11886.00** SQM

Contractor Representative

SAPNA CONSULTANTS & ENGINEERS Bangalore-59

Consultant Representative

Asst Engineer
Yelahanka New Town Sub Division
BBMP

Asst Executive Engineer
Yelahanka New Town Sub Division

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Restoration and Improvements of Roads from Doddaballapura Main Road to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO -12)

Measurement Sheet

FIFTH and PART

Item No:	18
Item Name:	KSRRB M500-17. Providing and laying Dense Graded Bituminous Macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with mechanical paver Gr-II (50mm to 75mm) with 4.5% VG-30 bitumen with all lead and lift and as per the direction of Engineer in-charge.I.No.-21.17.6,Pg.No.- 160 ,Data Rate

Final Measurement Date(s) : 22/07/2022

Chainage / Land Mark		Nos	L (m)	B (m)	B1 (m)	Avg B (m)	D (m)	Qty	REMARKS
Dense Graded Bituminous									
Self Financed Society 407 Colony, Road from Yelahanka (Major Unni Krishan) Road to 6th Main									
0.00	7.00	1	7.00	17.30	10.70	14.00	0.05	4.90	
7.00	30.00	1	23.00	10.70	10.50	10.60	0.05	12.19	
30.00	60.00	1	30.00	10.50	10.50	10.50	0.05	15.75	
60.00	90.00	1	30.00	10.50	10.40	10.45	0.05	15.68	
90.00	120.00	1	30.00	10.40	10.40	10.40	0.05	15.60	
120.00	150.00	1	30.00	10.40	11.10	10.75	0.05	16.13	
150.00	180.00	1	30.00	11.10	11.10	11.10	0.05	16.65	
180.00	210.00	1	30.00	11.10	11.30	11.20	0.05	16.80	
210.00	240.00	1	30.00	11.30	11.00	11.15	0.05	16.73	
240.00	270.00	1	30.00	11.00	13.00	12.00	0.05	18.00	
270.00	300.00	1	30.00	13.00	10.70	11.85	0.05	17.78	
300.00	330.00	1	30.00	10.70	10.80	10.75	0.05	16.13	
330.00	360.00	1	30.00	10.80	10.30	10.55	0.05	15.83	
360.00	390.00	1	30.00	10.30	10.80	10.55	0.05	15.83	
390.00	420.00	1	30.00	10.80	10.80	10.80	0.05	16.20	
420.00	450.00	1	30.00	10.80	10.90	10.85	0.05	16.28	
450.00	480.00	1	30.00	10.90	10.60	10.75	0.05	16.13	
480.00	510.00	1	30.00	10.60	10.80	10.70	0.05	16.05	
510.00	540.00	1	30.00	10.80	9.70	10.25	0.05	15.38	
540.00	570.00	1	30.00	10.60	11.60	11.10	0.05	16.65	
570.00	600.00	1	30.00	11.60	11.00	11.30	0.05	16.95	
600.00	630.00	1	30.00	11.00	10.80	10.90	0.05	16.35	
630.00	660.00	1	30.00	10.80	10.70	10.75	0.05	16.13	
660.00	690.00	1	30.00	10.70	11.00	10.85	0.05	16.28	
690.00	720.00	1	30.00	11.00	10.70	10.85	0.05	16.28	

SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

Chainage		Nos	L	B	B1	Avg B	D	Qty	REMA
Land Mark			(m)	(m)	(m)	(m)	(m)		
720.00	750.00	1	30.00	10.70	10.80	10.75	0.05	16.13	
750.00	780.00	1	30.00	10.80	9.00	9.90	0.05	14.85	
780.00	810.00	1	30.00	10.20	9.80	10.00	0.05	15.00	
810.00	840.00	1	30.00	9.80	9.80	9.80	0.05	14.70	
840.00	870.00	1	30.00	9.80	9.80	9.80	0.05	14.70	
870.00	900.00	1	30.00	9.80	9.60	9.70	0.05	14.55	
900.00	930.00	1	30.00	9.60	9.80	9.70	0.05	14.55	
930.00	960.00	1	30.00	9.80	11.20	10.50	0.05	15.75	
960.00	990.00	1	30.00	11.20	11.20	11.20	0.05	16.80	
990.00	1020.00	1	30.00	11.20	13.20	12.20	0.05	18.30	
1020.00	1050.00	1	30.00	13.20	13.50	13.35	0.05	20.03	
1050.00	1080.00	1	30.00	13.50	13.30	13.40	0.05	20.10	
1080.00	1110.00	1	30.00	13.30	14.00	13.65	0.05	20.48	
CONTINUITY ROAD									
1110.00	1139.00	1	29.00	10.80	9.80	10.30	0.05	14.94	
DEDUCTION									
E POLE		-6	0.30	0.30		0.30	0.05	-0.03	
RAMP		-1	4.20	0.30		0.30	0.05	-0.06	
FOOTPATH		-1	8.00	1.80		1.80	0.05	-0.72	
MANHOLE		-19	0.64				0.05	-0.60	
RAMP		-1	7.00	0.45		0.45	0.05	-0.16	
RAMP		-1	5.20	0.60		0.60	0.05	-0.16	
FOOTPATH		-1	14.00	2.00		2.00	0.05	-1.40	
TREE		-1	2.00	2.00		2.00	0.05	-0.20	
RAMP		-1	4.10	0.80		0.80	0.05	-0.16	
LAMP POST		-1	0.60	0.60		0.60	0.05	-0.02	
RAMP		-1	7.40	0.60		0.60	0.05	-0.22	
RAMP		-1	8.60	2.60		2.30	0.05	-0.99	

Total Qty	**618.75**
Total BOQ Quantity	**1396.48**
Quantity Paid up to Fourth Part Bill	**802.17**
Quantity Reserved for Approval of Workslip and EIRL	**24.44**
Qty Payable in this Bill	**594.31** CUM

Contractor Representative

Asst Engineer
Yelahanka New Town Sub Division
BBMP

SCIENCE CONSULTANTS & ENGINEERS Bangalore-59

Consultant Representative

Asst. Executive Engineer
Yelahanka New Town Sub Division
BBMP

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Restoration and Improvements of Roads from Doddaballa[illegible]oad to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO -12)

Measurement Sheet

FIFTH and PART

Item No:	19
Item Name:	Providing and laying Bituminous concrete , using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision - using 40-60 TPH capacity HMP with mechanical paver grading II (30-40mm) with 5.4% of VG-30 bitumen .Page no-162 It. No -21.22.6

Final Measurement Date(s) : 23/07/2022

Chainage / Land Mark		Nos	L (m)	B (m)	B1 (m)	Avg B (m)	D (m)	Qty	REMARKS
Bituminous concrete									
Self Financed Society 407 Colony, Road from Yelahanka (Major Unni Krishan) Road to 6th Main									
0.00	7.00	1	7.00	17.30	10.70	14.00	0.04	3.92	
7.00	30.00	1	23.00	10.70	10.50	10.60	0.04	9.75	
30.00	60.00	1	30.00	10.50	10.50	10.50	0.04	12.60	
60.00	90.00	1	30.00	10.50	10.40	10.45	0.04	12.54	
90.00	120.00	1	30.00	10.40	10.40	10.40	0.04	12.48	
120.00	150.00	1	30.00	10.40	11.10	10.75	0.04	12.90	
150.00	180.00	1	30.00	11.10	11.10	11.10	0.04	13.32	
180.00	210.00	1	30.00	11.10	11.30	11.20	0.04	13.44	
210.00	240.00	1	30.00	11.30	11.00	11.15	0.04	13.38	
240.00	270.00	1	30.00	11.00	13.00	12.00	0.04	14.40	
270.00	300.00	1	30.00	13.00	10.70	11.85	0.04	14.22	
300.00	330.00	1	30.00	10.70	10.80	10.75	0.04	12.90	
330.00	360.00	1	30.00	10.80	10.30	10.55	0.04	12.66	
360.00	390.00	1	30.00	10.30	10.80	10.55	0.04	12.66	
390.00	420.00	1	30.00	10.80	10.80	10.80	0.04	12.96	
420.00	450.00	1	30.00	10.80	10.90	10.85	0.04	13.02	
450.00	480.00	1	30.00	10.90	10.60	10.75	0.04	12.90	
480.00	510.00	1	30.00	10.60	10.80	10.70	0.04	12.84	
510.00	540.00	1	30.00	10.80	9.70	10.25	0.04	12.30	
540.00	570.00	1	30.00	10.60	11.60	11.10	0.04	13.32	
570.00	600.00	1	30.00	11.60	11.00	11.30	0.04	13.56	
600.00	630.00	1	30.00	11.00	10.80	10.90	0.04	13.08	
630.00	660.00	1	30.00	10.80	10.70	10.75	0.04	12.90	
660.00	690.00	1	30.00	10.70	11.00	10.85	0.04	13.02	
690.00	720.00	1	30.00	11.00	10.70	10.85	0.04	13.02	
720.00	750.00	1	30.00	10.70	10.80	10.75	0.04	12.90	

SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

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Chainage		Nos	L	B	B1	Avg B	D	Qty
Land Mark			(m)	(m)	(m)	(m)	(m)	
750.00	780.00	1	30.00	10.80	9.00	9.90	0.04	11.88
780.00	810.00	1	30.00	10.20	9.80	10.00	0.04	12.00
810.00	840.00	1	30.00	9.80	9.80	9.80	0.04	11.76
840.00	870.00	1	30.00	9.80	9.80	9.80	0.04	11.76
870.00	900.00	1	30.00	9.80	9.60	9.70	0.04	11.64
900.00	930.00	1	30.00	9.60	9.80	9.70	0.04	11.64
930.00	960.00	1	30.00	9.80	11.20	10.50	0.04	12.60
960.00	990.00	1	30.00	11.20	11.20	11.20	0.04	13.44
990.00	1020.00	1	30.00	11.20	13.20	12.20	0.04	14.64
1020.00	1050.00	1	30.00	13.20	13.50	13.35	0.04	16.02
1050.00	1080.00	1	30.00	13.50	13.30	13.40	0.04	16.08
1080.00	1110.00	1	30.00	13.30	14.00	13.65	0.04	16.38
CONTINUITY ROAD								
1110.00	1139.00	1	29.00	10.80	9.80	10.30	0.04	11.95
DEDUCTION								
E POLE		-6	0.30	0.30		0.30	0.04	-0.02
RAMP		-1	4.20	0.30		0.30	0.04	-0.05
FOOTPATH		-1	8.00	1.80		1.80	0.04	-0.58
MANHOLE		-19	0.64				0.04	-0.48
RAMP		-1	7.00	0.45		0.45	0.04	-0.13
RAMP		-1	5.20	0.60		0.60	0.04	-0.12
FOOTPATH		-1	14.00	2.00		2.00	0.04	-1.12
TREE		-1	2.00	2.00		2.00	0.04	-0.16
RAMP		-1	4.10	0.80		0.80	0.04	-0.13
LAMP POST		-1	0.60	0.60		0.60	0.04	-0.01
RAMP		-1	7.40	0.60		0.60	0.04	-0.18
RAMP		-1	8.60	2.60		2.30	0.04	-0.79

Total Qty	**495.00**
Total BOQ Quantity	**1052.24**
Quantity Paid up to Fourth Part Bill	**641.74**
Quantity Reserved for Approval of Workslip and EIRL	**84.50**
Qty Payable in this Bill	**410.50** CUM

Contractor Representative

CONSULTANTS & ENGINEERS Bangalore-59

Consultant Representative

Asst Engineer
Yelahanka New Town Sub Division
BBMP

Asst Executive Engineer
Yelahanka New Town Sub Division
BBMP

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Restoration and Improvements of Roads from Doddaballapura Main Road to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO -12)

Measurement Sheet

FIFTH and PART

Item No:	20
Item Name:	KSRRB M800-13. Road Marking with Hot Applied 'Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface / Concrete Surface :- Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications .MoRTH Specifications No.803(Pg.No-182,I.No.24.15)

Final Measurement Date(s) : 25/07/2022

Chainage / Land Mark	Nos	L (m)	B (m)	B1 (m)	Avg B (m)	D (m)	Qty	REMARKS
ROAD MARKING - Shoulders								
Self Financed Society 407 Colony, Road from Yelahanka (Major Unni Krishan) Road to 6th Main								
0.00	7.00	2	7.00					Approach
7.00	30.00	2	23.00			0.15	6.90	
30.00	60.00	2	30.00			0.15	9.00	
60.00	90.00	2	30.00			0.15	9.00	
90.00	120.00	2	30.00			0.15	9.00	
120.00	150.00	2	30.00			0.15	9.00	
150.00	180.00	2	30.00			0.15	9.00	
180.00	210.00	2	30.00			0.15	9.00	
210.00	240.00	2	30.00			0.15	9.00	
240.00	270.00	2	30.00			0.15	9.00	
270.00	300.00	2	30.00			0.15	9.00	
300.00	330.00	2	30.00			0.15	9.00	
330.00	360.00	2	30.00			0.15	9.00	
360.00	390.00	2	30.00			0.15	9.00	
390.00	420.00	2	30.00			0.15	9.00	
420.00	450.00	2	30.00			0.15	9.00	
450.00	480.00	2	30.00			0.15	9.00	
480.00	510.00	2	30.00			0.15	9.00	
510.00	540.00	2	30.00			0.15	9.00	
540.00	570.00	2	30.00			0.15	9.00	
570.00	600.00	2	30.00			0.15	9.00	
600.00	630.00	2	30.00					

SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

Chainage Land Mark		Nos	L (m)	B (m)	B1 (m)	Avg B (m)	D (m)	Qty	REMARKS
600.00	630.00	0.5	30.00			0.10		1.50	
630.00	660.00	0.5	30.00			0.10		1.50	
660.00	690.00	0.5	30.00			0.10		1.50	
690.00	720.00	0.5	30.00			0.10		1.50	
720.00	750.00	0.5	30.00			0.10		1.50	
750.00	780.00	0.5	30.00			0.10		1.50	
780.00	810.00	0.5	30.00			0.10		1.50	
810.00	840.00	0.5	30.00			0.10		1.50	
840.00	870.00	0.5	30.00			0.10		1.50	
870.00	900.00	0.5	30.00			0.10		1.50	
900.00	930.00	0.5	30.00			0.10		1.50	
930.00	960.00	0.5	30.00			0.10		1.50	
960.00	990.00	0.5	30.00			0.10		1.50	
990.00	1020.00	0.5	30.00			0.10		1.50	
1020.00	1050.00	0.5	30.00			0.10		1.50	
1050.00	1080.00	0.5	30.00			0.10		1.50	
1080.00	1110.00	0.5	30.00			0.10		1.50	
CONTINUITY ROAD									
1110.00	1139.00	0.5	29.00			0.10		1.45	
							Total Qty	396.20	
							Qty Payable in this Bill	396.20	SQM

Contractor Representative

SAPIENCE CONSULTANTS & ENGINEERS Bangalore-59

Consultant Representative

Asst Engineer
Yelahanka New Town Sub Division
BBMP

Asst Executive Engineer
Yelahanka New Town Sub Division
BBMP

BRUHAT BANGALORE MAHANAGARA PALIKE

NAME OF WORK:- Restoration and Improvements of Roads from Doddaballapura Main Road to Nagarjuna College, Kaveri Layout, Chowdappa Layout, Maruthinagara, Hariraja Layout and Surrounding Areas in Ward No - 03 of Yelahanka New Town Sub Division (PACKAGE NO -12)

Measurement Sheet

FIFTH and PART

Item No:	21
Item Name:	KSRRB M800-35. Supply and Installtion of Moulded Shank Raised Pavement Markers made of polycarbonate and ABS(Acrylonitrile Butadiene Styrene) moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to Specifications of Category A of MORTH Circular No RW/ NH/33023/10-97 - DO III Dt 11.06. 1997. The height, width and length shall not exceed 50 mm, 100 mm and 102 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 mm and height not less than 30 mm) from the body is to be a minimum value of 500 Kg. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer (Page No.187. Item No.24.41), SOR 2018-19

Final Measurement Date(s) : 25/07/2022

Chainage		Nos	L	B	B1	Avg B	D	Qty	REMARKS
Land Mark			(m)	(m)	(m)	(m)	(m)		
Self Financed Society 407 Colony, Road from Yelahanka (Major Unni Krishan) Road to 6th Main									
0.00	1110.00	2	1110.00			(2 X LENGTH/6)		370.00	
							Total Qty	**370.00**	
							Qty Payable in this Bill	**370.00**	**NO'S**

Contractor Representative

SAPIENT CONSULTANTS & ENGINEERS Bangalore-59

Consultant Representative

Asst Engineer
Yelahanka New Town Sub Division
BBMP

Asst Executive Engineer
Yelahanka New Town Sub Division
BBMP